

Amendments to the Claims:

This listing of claims will replace all prior versions and listings of claims in the application.

Listing of Claims:

1. (Original) A method for the synthesis of large area uniform silicon cone arrays on a substrate by ion-beam sputtering, wherein total pressure is kept at 2×10^{-4} Torr, silicon is used as a substrate, and a metal is used as a catalyst.
2. (Previously Presented) A method as claimed in claim 1 wherein the ion-beam sputtering is carried out using a sputter gas that is selected from the group consisting of helium, neon, argon, xenon and hydrogen.
3. (Previously Presented) A method as claimed in claim 1 wherein the catalyst is selected from the group consisting of molybdenum, tungsten and nickel.
4. (Original) A method as claimed in claim 1 wherein the substrate temperature ranges from 100°C to 600°C.
5. (Original) A method as claimed in claim 1 wherein the ion energy is maintained in the range of 100eV to 1000eV.
6. (Previously Presented) A method as claimed in claim 1 wherein the angle between the center of the ion-beam and the substrate surface normal ranges from 0 to 90 degrees.
7. (Original) A method as claimed in claim 1 wherein the fabrication time is between 30-240 minutes.
8. (Cancelled)

9. (Previously Presented) A method for the synthesis of large area uniform cone arrays made of a first material by ion-beam sputtering, wherein the first material is used as a substrate, and a second material is used as a catalyst, wherein the first material is selected from a group consisting of germanium or graphite, wherein the second material is a metal.

10. (Previously Presented) Apparatus for ion-beam sputtering of large area uniform silicon cones, comprising a high vacuum chamber suitable for ion-beam sputtering, an ion-source, means for holding a substrate in the chamber, means for arranging a metal catalyst around the substrate, means for adjusting the substrate temperature and means for adjusting the angles between the center of the ion-beam of said ion-beam sputtering and the substrate surface normal.

11. (Original) Apparatus as claimed in claim 10 wherein the ion source is an rf ion source or a Kaufman ion-source.

12. (Previously Presented) Apparatus as claimed in claim 10 wherein said substrate holder means comprises a substrate holder clamp made of molybdenum, tungsten, or nickel.

13-38. (Cancelled)

39. (Previously Presented) Apparatus for ion-beam sputtering of large area uniform silicon cones, comprising a high vacuum chamber suitable for ion-beam sputtering, an ion source, means for holding a substrate in the chamber, means for arranging a metal catalyst around the substrate, means for adjusting the substrate temperature, means for adjusting the angles between the center of the ion beam of said ion-beam sputtering and the substrate surface normal, and means for maintaining the vacuum chamber at an operating pressure of 2×10^{-14} Torr.